

EPIDEMIOLOGY BULLETIN

Donald R. Stern, M.D., M.P.H., Acting Commissioner Grayson B. Miller, Jr., M.D., Epidemiologist Editor: Elizabeth Eustis Turf, Ph.D. Lavout Editor: Vickie L. O'Dell

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Summary of Reportable Diseases, Virginia, 1994 *

This issue of the Bulletin contains summary data on reportable diseases in Virginia for calendar year 1994. This information was compiled from reports received from physicians, directors of medical care facilities and directors of laboratories who report notifiable conditions listed in the Regulations for Disease Reporting and Control to the health department. As of July 1, 1993, 69 conditions were reportable. The Office of Epidemiology, Virginia Department of Health (VDH) is responsible for the statewide surveillance of those diseases specified as reportable by these regulations and for coordinating the inves-

tigation of those diseases with the local health directors.

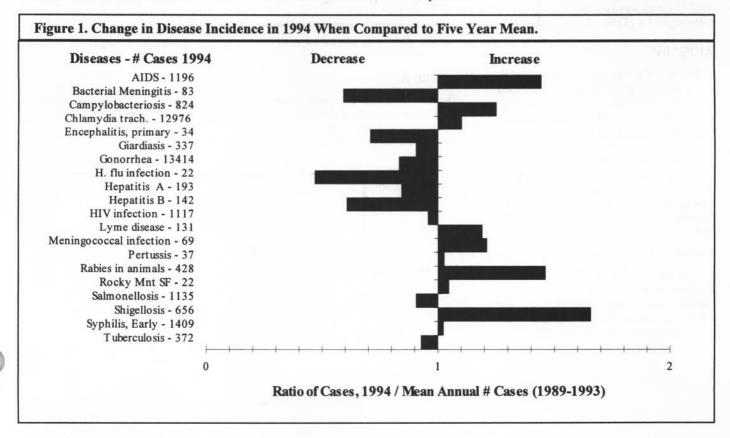
Data Sources

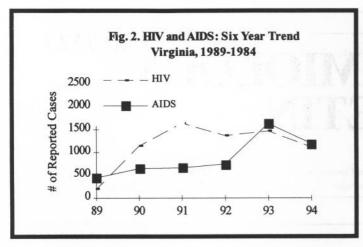
Provisional data on the reported occurrence of notifiable diseases are published in each issue of the Bulletin. These data are compiled in final form in the Virginia Department of Health's annual surveillance report entitled *Reportable Disease Surveillance in Virginia*. Because of the complexity of the annual report, its production and distribution are delayed. In order to provide a more timely annual summary, this issue of the Bulletin is devoted to the presenta-

tion of a brief description of the 1994 surveillance data (See page 5 for an announcement regarding availability of the 1993 report).

Trend Data

Figure 1 shows a group of selected diseases that demonstrated a change (increase or decrease) in number of reported cases in 1994 when compared to the five year mean. The data are shown as a ratio of the number of cases reported in 1994 to the average number of cases reported during the previous five years (5-year mean).





1994 HIGHLIGHTS FOR SELECTED DISEASES

This section highlights important developments in occurrences of certain reportable diseases.

Amebiasis

An outbreak of amebiasis in the northern health planning region had a marginal influence on the increase in the number of reported cases in 1994 (39 cases) compared to 1993 (34 cases). More reports of sporadic cases from the southwest region in 1994 (14 cases) compared to 1993 (2 cases) was a greater contributing factor (Table 1).

AIDS/HIV

In 1994, the number of reported AIDS cases decreased by 27% but remained higher than the five year mean. The number of HIV reports in 1994 was 24% less than 1993, as seen in Figure 2.

The implementation of the expanded AIDS surveillance case definition in 1993 influenced the diagnosis and reporting of AIDS cases in that year. The number of reports increased more than 100% over the number of reports in 1992. This effect was also seen in 1994 but to a lesser extent.

Campylobacteriosis

The total number of *Campylobacter* infections in 1994 (824) was the highest number ever reported. This increase over 1993 was statewide and represents the fourth consecutive annual increase.

Haemophilus influenzae Infection, Invasive

Reports of invasive Haemophilus influenzae in fections continued to decline. The number of reported cases has decreased 81% between 1989 and 1994 (Figure 3). The decline is attributed to a decrease in the num-

ber of cases among children <5 years of age. This age group represented 79% of the reported cases in 1989 and only 27% in

Fig. 3. Invasive H. influenzae:
Six Year Trend, Virginia, 1989-1994

1994. This decline is associated with the introduction of Hib conjugate vaccines.

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Hepatitis A

89 90 91

The annual number of reported cases of hepatitis A increased for the first time since 1989, but was still less than the five year mean. The number of reported cases in-

creased in all but the central health planning region (Table 1). The largest increase occurred in the southwest region which reported 29 cases in 1994 compared to nine cases in 1993. Statewide, the increase in reported cases was seen primarily in the adult population. However, in the southwest region, the increase was identified in young children and adults.

Hepatitis Non-A Non-B

Hepatitis non-A, non-B decreased to an all time low of 26 cases in 1994. This is approximately one-fourth the number of cases reported ten years ago.

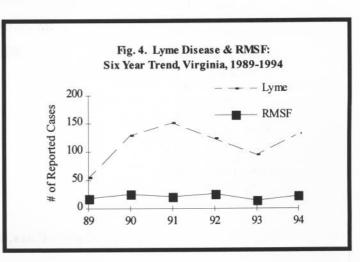
Histoplasmosis

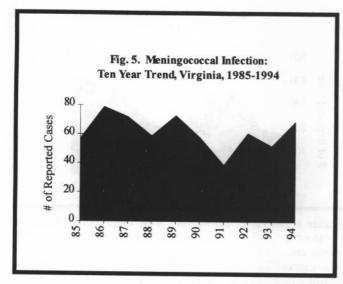
An unusual number of cases of histoplasmosis (185) was reported in Virginia in 1994 due to an outbreak identified in a correctional facility. The reported cases included inmates and employees. The outbreak, which occurred during the summer months, was associated with the clean-up of debris in and around soil contaminated with spore forms of *Histoplasma capsulatum*. Infection resulted from inhalation of airborne spores.

Lyme Disease

Lyme disease became a reportable condition in Virginia in 1989, but cases have been recorded since 1982. Since becoming reportable, Lyme disease has been the leading tickborne illness reported in Virginia, outnumbering reported cases of Rocky Mountain spotted fever (RMSF) by a ratio of 5.4:1 (Figure 4). In 1994, 131 cases were reported (a 38% increase from the 95 cases reported in 1993) compared to 22 reported cases of RMSF. The in-

crease in reported cases of Lyme disease in 1994 was attributed to a notable increase in the number of cases reported from the eastern health planning region (Table 1). Reported cases from this region totaled 44 in 1994 compared to 17 cases in 1993.





Meningococcal Infection

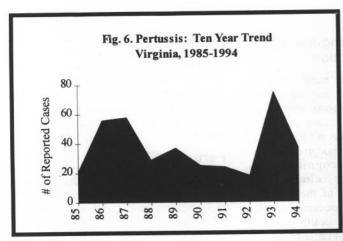
The number of reported meningococcal infections increased from 52 cases in 1993 to 69 cases in 1994 (Figure 5). Although there were no recognized outbreaks, almost half (46%) of the reported cases occurred in the eastern health planning region (Table 1). Fortyfour percent (14/32) of the cases reported from that region occurred during the second quarter (Apr-May-Jun) of the year, a pattern not seen in other regions of the state. Two localities, Norfolk and Virginia Beach, accounted for 66% (10 and 11 cases, respectively) of the total number of meningococcal infections reported from the eastern region. Three deaths associated with meningococcal infection were reported.

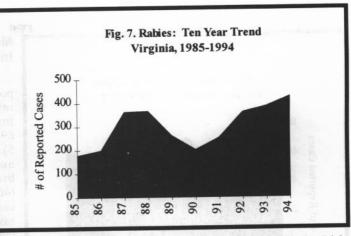
Pertussis

Between 1993 and 1994, the number of reported pertussis cases decreased from 75 to 37, but remained slightly higher than the five year mean. When a ten year trend is examined, it is seen that the number of reports in 1993 was unusually high (Figure 6). The rise and fall in reported pertussis cases during these two reporting periods coincided with the national trend.

Table 1: Number of Reported Cases and Rate/100,000 Population for Selected Diseases by Health Planning Region, 1994

DISEASE 1993 Population Estimates	TOTAL 6,405,889		NORTHWEST REGION 874,596		NORTHERN REGION 1,552,461		SOUTHWEST REGION 1,247,427		CENTRAL REGION 1,093,539		EASTERN REGION 1,637,866	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
AIDS	1196	18.67	72	8.23	308	19.84	109	8.74	282	25.79	425	25.95
Amebiasis	39	0.61	1	0.11	16	1.03	14	1.12	6	0.55	2	0.12
Aseptic meningitis	337	5.26	34	3.89	75	4.83	34	2.73	24	2.19	170	10.38
Bacterial meningitis	83	1.30	19	2.17	11	0.71	14	1.12	3	0.27	36	2.20
Campylobacteriosis	824	12.86	172	19.67	166	10.69	153	12.27	204	18.66	129	7.88
Chickenpox	2844	44.40	131	14.98	675	43.48	212	16.99	118	10.79	1708	104.28
Chlamydia trachomatis inf.	12976	202.56	1496	171.05	1763	113.56	2425	194.40	2456	224.59	4836	295.26
Encephalitis, primary	34	0.53	1	0.11	6	0.39	8	0.64	3	0.27	16	0.98
Giardiasis	337	5.26	39	4.46	110	7.09	82	6.57	43	3.93	63	3.85
Gonorrhea	. 13414	209.40	769	87.93	1123	72.34	1597	128.02	3685	336.98	6240	380.98
H. influenzae infection	22	0.34	9	1.03	2	0.13	3	0.24	1	0.09	7	0.43
Hepatitis A	193	3.01	14	1.60	85	5.48	29	2.32	18	1.65	47	2.87
Hepatitis B	142	2.22	9	1.03	37	2.38	30	2.40	23	2.10	43	2.63
Hepatitis Non-A Non-B	26	0.41	1	0.11	4	0.26	6	0.48	12	1.10	3	0.18
Histoplasmosis	185	2.89	2	0.23	0	0.00	1	0.08	182	16.64	0	0.00
HIV infection	1117	17.44	64	7.32	253	16.30	91	7.30	303	27.71	406	24.79
Influenza	957	14.94	228	26.07	5	0.32	565	45.29	37	3.38	122	7.45
Kawasaki syndrome	27	0.42	1	0.11	10	0.64	6	0.48	1	0.09	9	0.55
Legionellosis	17	0.27	5	0.57	0	0.00	7	0.56	1	0.09	4	0.24
Lyme disease	131	2.04	10	1.14	42	2.71	25	2.00	10	0.91	44	2.69
Malaria	37	0.58	0	0.00	32	2.06	1	0.08	1	0.09	3	0.18
Measles	3	0.05	1	0.11	1	0.06	0	0.00	0	0.00	1	0.06
Meningococcal infection	69	1.08	12	1.37	5	0.32	10	0.80	10	0.91	32	1.95
Mumps	48	0.75	6	0.69	11	0.71	11	0.88	3	0.27	17	1.04
Pertussis	37	0.58	6	0.69	13	0.84	2	0.16	6	0.55	10	0.61
Rabies in animals	428		121		75		86		73		73	0.01
Rocky Mtn spotted fever	22	0.34	4	0.46	6	0.39	3	0.24	5	0.46	4	0.24
Salmonellosis	1135	17.72	180	20.58	258	16.62	159	12.75	293	26.79	245	14.96
Shigellosis	656	10.24	35	4.00	129	8.31	56	4.49	285	26.06	151	9.22
Syphilis, early	1409	22.00	26	2.97	27	1.74	67	5.37	185	16.92	1104	67.40
Tuberculosis	372	5.81	26	2.97	123	7.92	51	4.09	73	6.68	99	6.04





Rabies in Animals

The total number of laboratory confirmed rabid animals in 1994 (428 cases) increased by 11% from the total in 1993 and is the highest annual number of cases reported during the last ten years (Figure 7). The raccoon rabies outbreak continued its expansion with four counties reporting rabid raccoons for the first time: Accomack, Amherst, Smyth, and Halifax. Seventy-nine percent of the cities and counties in Virginia have reported rabid raccoons since 1978.

For the thirteenth consecutive year, raccoons were the most commonly reported species with rabies. The 251 rabid raccoons accounted for 59% of all rabid animals reported in 1994, compared to 55% in 1993. Other wildlife reported as rabid in 1994 included 105 skunks, 17 foxes, 9 bats, 5 groundhogs, 1 opossum, and 1 otter. Rabid domestic animals included 25 cats, 9 cows, 4 dogs and 1 horse. The 25 rabid cats reported is the most since 1954.

Salmonellosis

Reported cases of Salmonella infections increased in 1994 (1,135 cases) compared to 1993 (1,055) but remained lower than the five year mean. The number of cases reported in 1994 represents the second con-

secutive annual increase after a general decline which began after 1988 when 1,733 cases were reported. Nationally, and in Virginia, the number of reported cases of Salmonella infections in 1994 was influenced by the consumption of items contaminated with S. enteritidis that were distributed in all 48 contiguous states.

† Contaminated ice cream products

Sexually Transmitted Diseases

During 1994, the number of reported cases of sexually transmitted diseases increased significantly compared to 1993. Early syphilis (1,409 cases) increased by 11% over 1993 and was also slightly higher than the five year mean. The number of reports of early syphilis has more than doubled since 1985 (Figure 8). Gonorrhea (13,414 cases) increased by 15% and Chlamydia trachomatis infections (12,976 cases) increased by 13.9% in 1994.

Shigellosis

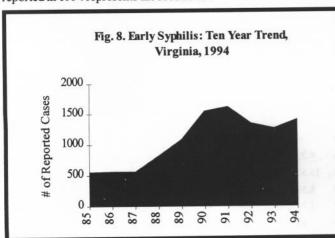
The 656 reported cases of shigellosis in 1994 was a 15% decrease from the 776 cases reported in 1993 but well above the five year mean of 396 cases. The 776 cases reported in 1993 were the highest number reported since 1981 when 1211 cases were reported (Figure 9). In both 1981 and 1993,

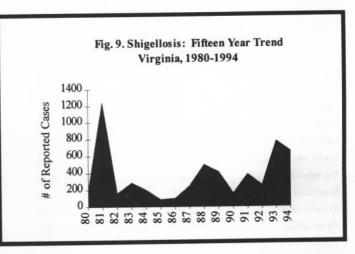
community wide outbreaks in the Richmond metropolitan area occurred.

Tuberculosis

Virginia reported 372 cases of tuberculosis (TB) in 1994. This represents a 19% decrease from the 458 cases reported in 1993. Pulmonary disease accounted for 73% of all TB in 1994 and 92% of the cases were culture confirmed. Of the number of TB cases tested for drug sensitivity, 17% were resistant to at least one first-line anti-TB drug. This is an increase from 13% in 1993. The number of drug-resistant TB cases in 1994 totalled 48. Of these, ten were resistant to both isoniazid and rifampin. Thirty-eight percent of the TB cases were foreign-born and 19% of all cases tested for HIV infection were seropositive.

Although the number of TB cases in Virginia declined in 1994, the cases that remain are more difficult to manage and more expensive to treat. For this reason, the use of cost effective interventions, such as directly observed therapy, increased from 28% of all cases starting therapy in 1993 to 39% in 1994.





EMERGING INFECTIOUS DISEASES

Escherichia coli O157:H7

Escherichia coli O157:H7 is recognized as an important emerging pathogen, causing an estimated 10,000-20,000 infections in the United States each year. People at the extremes of age are especially susceptible to E. coli O157:H7-associated illness, but individuals of all ages have been affected. The most important complication of E. coli O157:H7 infection is hemolytic-uremic syndrome (HUS). In 1994, an outbreak of E. coli O157:H7 in a summer camp was reported. One case was diagnosed with HUS. Consumption of rare (red or pink) ground beef during the camp session was associated with an increased risk for illness (MMWR, June 9,1995).

An increase in screening stool samples for *E. coli* O157:H7 by laboratories in Virginia has resulted in the identification of more cases and an earlier detection of clusters of illness. The Office of Epidemiology is interested in hearing about cases of HUS or *E. coli* O157:H7 infection.

Group A Streptococcal Disease

Changes in the epidemiology of Group A streptococcal (GAS) infections have included outbreaks of rheumatic fever, the emergence of streptococcal toxic shock syndrome (STSS), and a general increase in the rate of invasive disease. These changes have been associated with an increasing proportion of invasive infections caused by more virulent strains (M-types), and an increase in the proportion of organisms producing pyrogenic exotoxin A, which has been linked to STSS. The Office of Epidemiology investigated an outbreak of invasive GAS infections in the Shenandoah Valley last winter (Virginia Epidemiology Bulletin, January/February 1995), and is working with the CDC and others to define recommendations for prevention. Although not officially reportable, the health department is interested in learning about all cases of invasive GAS infections.

Hantavirus Pulmonary Syndrome

Hantavirus pulmonary syndrome (HPS), characterized by an influenza-like prodrome followed by the acute onset of respiratory failure, was first identified in June 1993 during the investigation of an outbreak of illness in the southwestern United States. Hantavirus is carried by infected wild rodents, primarily deer mice (Peromyscus maniculatus). Humans are thought to be at risk for infection after exposure to rodent excreta, either through the aerosol route or by direct inoculation. Studies of rodents in Virginia have identified mice with antibodies to hantavirus in Prince William, Rappahannock, Madison and Giles counties. Late in 1994, laboratory tests conducted by the Centers for

Disease Control and Prevention confirmed the diagnosis of HPS in a man with acute respiratory distress syndrome (ARDS). The man was hospitalized while hiking the Appalachian Trail. The hiker fully recovered from his illness which is believed to have been acquired in Virginia. Additional testing of mice in southwest Virginia, where the infection was suspected to have been acquired, was negative.

EPIDEMIOLOGIC NOTES

The data provided here represent a portion of disease surveillance statistics for 1994 and include cases that had disease onset during the 1994 calendar year or were first reported in 1994. Data presented here may differ from provisional data published in 1994 issues of the Bulletin because additional information is gathered throughout the year. Incidence rates were calculated using 1993 population estimates.

The full annual report for the year 1994 will be compiled and distributed in a separate document entitled *Reportable Disease Surveillance in Virginia*, 1994. In addition, surveillance staff will continue to analyze disease occurrence and report on the findings in future issues of this Bulletin.

*Article submitted by Leslie M. Branch and Mary Jean Linn, Bureau of Disease Surveillance and Epidemiologic Studies.



Course in Hospital Epidemiology

CDC, the Society for Healthcare Epidemiology of America (SHEA), and the American Hospital Association will cosponsor a hospital epidemiology training course October 14-17, 1995, in Miami, Florida. The course, designed for infectious disease fellows, new hospital epidemiologists, and infection-control practitioners, provides hands-

on exercises to improve skills in detection, investigation, and control of epidemiologic problems encountered in the hospital setting and lectures and seminars on fundamental aspects of hospital epidemiology.

Additional information is available from SHEA Meetings Department, Suite 200, 875 Kings Highway, Woodbury, NJ 08095-3172; telephone (609) 845-1720; fax (609) 853-0411.

Surveillance Report Available

The Virginia Department of Health's annual surveillance report entitled Reportable Disease Surveillance in Virginia, 1993 is available. This document summarizes morbidity information reported in Virginia during calendar year 1993. In it you will find statistics on reportable diseases by year, region, age, race, sex, and time of onset. Through the report, information is presented in the form of narratives, graphs, tables, and maps. If you are interested in receiving a copy of this report, please call the Office of Epidemiology at (804) 786-6261. This publication is distributed free of charge.

	To	tal Cases	Repor	ted Thi	Total Cases Reported to Date					
		1		Regions			in Virginia			
Disease	State	NW	N	SW	С	E	This Yr	Last Yr	5 Yr Avg	
AIDS	165	4	51	21	23	66	400	435	364	
Campylobacteriosis	40	11	4	8	13	4	118	168	132	
Gonorrhea	668	18	50	41	291	268	3566	4164	4907	
Hepatitis A	18	3	3	3	4	5	65	39	55	
Hepatitis B	9	2	3	3	0	1	31	33	61	
Hepatitis NANB	2	0	0	0	1	1	2	15	12	
Influenza	13	0	0	13	0	0	824	810	677	
Kawasaki Syndrome	4	0	1	2	0	1	7	7	9	
_egionellosis	1	0	0	1	0	0	3	2	4	
Lyme Disease	1	0	0	0	0	1	3	13	11	
Measles	0	0	0	0	0	0	0	1	11	
Meningitis, Aseptic	15	0	5	1	1	8	49	49	59	
Meningitis, Bacterial†	20	5	3	4	4	4	53	27	43	
Meningococcal Infections	5	0	0	2	0	3	26	25	19	
Mumps	3	0	1	0	1	1	10	18	20	
Pertussis	7	0	6	0	0	1	7	13	7	
Rabies in Animals	45	10	4	10	12	9	123	133	93	
Reye Syndrome	0	0	0	0	0	0	0	1	0	
Rocky Mountain Spotted Fever	0	0	0	0	0	0	0	0	0	
Rubella	0	0	0	0	0	0	0	0	0	
Salmonellosis	64	8	15	7	19	15	226	254	253	
Shigellosis	21	3	11	2	3	2	57	194	102	
	116	0	0	7	17	92	458	454	504	
Syphilis, Early‡	20	0	12	7	2	Q	61	97	115	

Localities Reporting Animal Rabies: Accomack 4 raccoons; Albemarle 1 raccoon; Campbell 1 raccoon; Chesterfield 1 raccoon; Clarke 1 cow; Cumberland 1 raccoon; Dinwiddie 2 raccoons; Fairfax 1 fox, 2 raccoons; Fauquier 1 cat, 1 fox, 1 raccoon; Franklin County 3 raccoons; Gloucester 1 cat, 1 raccoon; Grayson 1 skunk; Hanover 1 skunk; King William 1 skunk; Lancaster 1 raccoon; Loudoun 1 skunk; Lunenburg 1 raccoon, 2 skunks; Madison 1 fox; Montgomery 1 skunk; Orange 1 raccoon; Patrick 1 raccoon; Pittsylvania 1 cat; Prince George 1 raccoon; Richmond City 2 raccoons; Rockingham 1 cow, 1 skunk; Smyth 1 raccoon; Stafford 1 skunk; Surry 1 cat; Tazewell 1 raccoon; Virginia Beach 1 raccoon.

Occupational Illnesses: Asbestosis 17; Carpal Tunnel Syndrome 37; Coal Workers' Pneumoconiosis 16; Lead Poisoning 1; Loss of Hearing 20.

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Tuberculosis

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^{*}Data for 1995 are provisional.

[†]Other than meningococcal.

[‡]Includes primary, secondary, and early latent.